

Name _____

Class Period/Day _____ Date _____

Gel Electrophoresis Virtual Lab

Directions: Open Internet Explorer and type "gel electrophoresis virtual lab" in the google search box in the upper right corner of your screen. Click on the first search result gel electrophoresis virtual lab. Answer the questions below as you complete the lab.

1. What is DNA?
2. What is the shape of DNA called?
3. What is the process of gel electrophoresis used for?
4. What is the purpose of the holes (wells) at one end of the gel?
5. What force makes the DNA move through the gel?
6. How are the DNA strands sorted? (Which ones move the farthest?)
7. What are the bands in the gel composed of?
8. What supplies do you need to make your own gel?
9. What is agarose made from?
10. What is the purpose of the buffer?
11. What does the "comb" do to the gel?
12. What tools do you use to place the DNA samples into the gel?
13. What is the purpose of the loading buffer?
14. Where do you put the DNA samples?
15. What is the DNA size standard and what is its purpose?
16. How can you tell if the electric current is running through the gel?
17. Which DNA strands move the fastest and the farthest?
18. Why do you have to stain the DNA?

19. Why should you avoid contact with the stain?

20. Why should you wear protective eyewear when viewing the DNA bands?

21. What are the lengths of the DNA bands on your gel?

a. _____

b. _____

c. _____

Now scroll down and click on "Can DNA Demand a Verdict?"

1. About how much DNA does everyone have in common?

2. What kinds of evidence from a crime scene might provide a DNA sample?

3. What do investigators do to detect possible contamination of DNA samples?

4. Write a paragraph explaining the 8 steps used in Forensic DNA Analysis. (box on the right side of the screen) Use your OWN words!